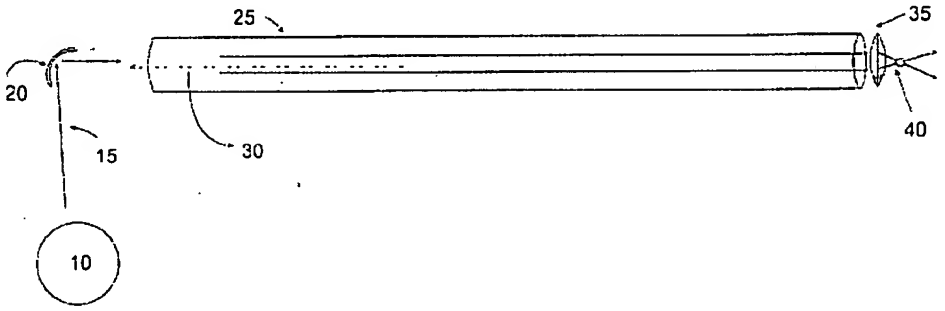
Remarks

In the office action mailed July 27, 2006, claims 1, 2, 7 and 10 - 23 were again rejected under 35 U.S.C. §102(a) over U.S. Published Patent Application No. 2003/0032204 (to Walt et al.); claim 3 was rejected under 35 U.S.C. §103(a) over Walt et al. in view of U.S. Patent No. 6,864,980 (to Te Kolste et al.); claims 4 - 6 were rejected under §103(a) over Walt et al.; claim 8 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 6,266,476 (to Shie et al.); claim 9 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 5,877,009 (to Mandella et al.); and claim 24 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 5,512,745 (to Finer et al.).

The Walt et al. reference does not disclose a device that directs each of individual beamlets to *a plurality of locations* on a target. One channel (or fiber) of the Walt et al. device is shown below.



Walt et al., Figure 1A. The micromirror 20 is disclosed to be either switched on or off, and is not disclosed to be used to cause the focal point of the lens 35 to move with respect to the lens 35. The specification states that each fiber "can be selectively turned off and on" (Walt et al., ¶0033) by "switching a mirror on or off" (Walt et al., ¶0064 and ¶0067). The Walt et al. disclosure further explains that the subject moves with respect to the fibers, and that when a fiber (light) is not on, the subject moves past the focal area for that fiber and

associated lens. When the fiber is switched on, a particle (e.g., a microsphere as shown in Figure 6) is held in place relative the movement of the remaining subject (Walt et al., ¶0065).

Claim 1 is directed to an optical manipulation system and requires, in part, that each beamlet source includes adjustment means, and that each adjustment means is associated with a focusing element to selectively direct a beamlet of electromagnetic energy toward a *plurality of selectable focal locations*. The devices of Walt et al. are not disclosed to selectively direct a beamlet of energy toward a plurality of focal locations. Each fiber assembly of the Walt et al. reference, is only able to direct energy toward *a single* focal location or be turned off. Moreover, it is not at all clear whether the use of optical fibers in the Walt et al. reference could even be used to achieve the objectives of the present invention since the direction of illumination exiting the fiber would need to be adjustable. It is possible that the internal reflections within the fiber would thwart efforts to direct the illumination onto the lens with the precision needed to provide selectable focal locations for each lens.

The difference between simply trapping a single particle (as in Walt et el.) and moving a particle with respect to the lens, is significant. The system of applicants' invention permits single particles to be separated from groups of particles and permits particles to be passed to neighboring beamlets.

Claim 1, therefore, is not anticipated by the Walt et al. reference. Claim 1, therefore, is in condition for allowance. Claims 2 - 10 each depend directly from claim 1, and is also in condition for allowance.

Claim 11 also requires that a beamlet of electromagnetic energy is selectively directed via an associated focusing element toward a *plurality* of selectable focal *locations* with respect to the focusing element on the adjacent substrate. The devices of the Walt et al. reference do not direct energy toward a plurality of selectable focal locations with respect to each focusing element. Claim 11, therefore, is considered to be in condition for allowance.

Claim 12 is directed to a system and requires that each focusing element is positioned to direct a focused beam toward a particle to be manipulated such that each of a plurality of directionally selective elements is configured to be employed to *move* a focused beam with respect to an associated focusing element to thereby manipulate a particle. The devices of the Walt et al. reference do not include mirrors that may each be employed to *move* a focused beam with respect to an associated focusing element. Claim 12, therefore, is considered to be in condition for allowance. Each of claims 13 - 17 depends from claim 12 and further limits the subject matter thereof. Each of claims 12 - 17 is therefore in condition for allowance.

Claim 18 is directed to a method and states that a beamlet of electromagnetic energy is selectively directed via an associated focusing element toward a *plurality* of selectable focal *locations* with respect to the focusing element on the adjacent substrate. Again, the devices of the Walt et al. reference do not direct energy toward a plurality of selectable focal locations with respect to each focusing element. Claim 18, therefore, is considered to be in condition for allowance.

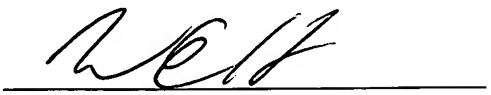
Claim 19 is directed to a method and states that the step of selectively controlling each of the beamlets involves selectively directing a beamlet toward a *plurality* of

selectable *locations* with respect to the associated focusing element on an adjacent substrate via an associated focusing element to manipulate the plurality of particles. Again, the devices of the Walt et al. reference direct energy toward a single focal location, not *plurality* of selectable focal locations with respect to each focusing element. Claim 19, therefore, is considered to be in condition for allowance. Each of claims 20 - 22 depends directly or indirectly from claim 19 and further limits the subject matter thereof. Each of claims 19 - 22 is therefore in condition for allowance.

Claim 23 is directed toward a method and states that the step of selectively controlling *each* of the micromirrors involves selectively directing a beamlet toward a *plurality* of selectable *locations* with respect to an associated focusing element on an adjacent substrate via an associated focusing element to manipulate the plurality of particles. Claim 23, therefore, is considered to be in condition for allowance. Again, the devices of the Walt et al. reference direct energy toward a single focal location, not *plurality* of selectable focal locations with respect to each focusing element. Claim 24 depends from claim 23 and further limits the subject matter thereof. Each of claims 23 and 24 is therefore in condition for allowance.

Each of claims 1 - 24, therefore is in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,



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